43rd Meeting of the Radiation Safety Standards Committee

November 2017

Agenda Item: R5.2
Priorities for the Next Term

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Scientific Secretary
General Issues

Implementation of Lessons Learnt from the Fukushima Daiichi NPP Accident in the Review and Revision of Radiation Safety Guidance Documents

RASSC noted that many the lessons from the Fukushima Daiichi NPP accident are still being learnt, and will continue to be learnt in the future. It is important that the experiences gained in Japan and elsewhere since 2011 are fully reflected in the IAEA safety standards. This is an ongoing issue relevant to all Safety Standards Committees.
Cooperate with UNSCEAR and Other Relevant International and Professional Organizations on the Possible Implications of Emerging Scientific Information on Radiation Safety Guidance Documents

The System of Radiological Protection is a combination of science and ethical considerations. New scientific knowledge on radiation exposure and its effects continue to be published and some may have the potential to impact the current System. Issues of particular interest include the linear-no-threshold hypothesis, the latest results from low-dose research, non-cancer effects and second primary cancers following radiotherapy
General issues

Implementation of GSR Part 3 (International Basic Safety Standards - the BSS)

RASSC supports the policy of implementing the BSS through national workshops and through regional workshops addressing a specific issue. The three general safety guides – dealing with occupational radiation protection (DS453), radiation protection in medicine (DS399) and radiation protection of the public and the environment (DS432) – have been finalized and are awaiting publication. Once published, these three safety guides can form the basis of assistance to Member States in implementing the BSS.

RASSC proposed that suitable topics for BSS workshops could be non-medical human imaging, radionuclides in food and drinking water, radon, radiation protection in veterinary medicine and implementation of the new dose limit for the lens of the eye.
General issues

Uncertainties and Conservatism in Dose Assessment

The discussions on the revision of the safety guide *Application of the Concepts of Exclusion, Exemption and Clearance* (RS-G-1.7) highlighted the conservative nature of the approach to dose assessment. While a precautionary approach is an integral component of the System of Radiological Protection, unnecessary conservatism does not improve protection and has an economic cost for industry. The Secretariat needs to ensure that additional conservatism is avoided in the development of quantitative guidance, in particular.
Radon in Homes

UNSCERAR has recently initiated a scientific report “Lung cancer from exposure to radon and to penetrating radiation” which is expected to be available in 2019. At the same time, ICRP is reviewing its dose-conversion factors for radon and has already indicated that these are likely to increase by about a factor of two over current values. Increases in the dose-conversion factors have implications for occupational radiation protection, particularly in uranium mining and NORM industries, and will need to be addressed in the IAEA safety standards.
Specific Issues

Radiation Exposure of Aircrew and Space Crew

Commercial airlines are now flying at higher altitudes than in the past, with the result that radiation doses from cosmic radiation are also increasing. In addition, a number of commercial companies are offering space travel, to commence within the next few years. It is important to assess the radiation implications of the radiation doses likely to be received by workers and the public and to develop appropriate guidance.
Radionuclides in Food and Drinking Water

The publication in 2015 of TECDOC-1788 *Criteria for Radionuclide Activity Concentrations for Food and Drinking Water* has highlighted the need for harmonized criteria to be developed to manage radioactivity in food and drinking water in non-emergency situations. The need for such an improved framework has been highlighted in the IAEA General Conference resolution GC(60)/RES/9 in 2016 and GC(61)/RES/5 for 2017.
Specific Issues

Graded Approach to Regulation, in particular NORM Regulation

The graded approach is an integral and important component of the System of Radiological Protection. While there is evidence of increased awareness and improved application of the graded approach by regulatory bodies, this is not always the case in relation to the control of NORM. As greater experience is gained in the management of NORM industries, application of the graded approach must be central to the approach of both the regulator and the operator.
Non-Medical Human Imaging

The safety guide *Radiation Safety of X-Ray Generators and Radiation Sources Used for Inspection Purposes and for Non-Medical Imaging* has been finalized and is awaiting clearance for publication. The issues addressed in the safety guide are particularly relevant in today’s society and impact to some extent on every Member State. Increased emphasis on national security is giving rise to radiation exposure of members of the public in a variety of situations, often without the necessary controls being in place. The IAEA needs to work with other relevant international organizations to promote the adoption and use of this new guidance document.
Specific Issues

Radiation Protection in Veterinary Medicine

Veterinary medicine is a rapidly expanding science and all diagnostic and therapeutic applications for humans already are being, or are likely to be, used on animals. Often the exposures are undertaken in conditions that are far from optimum and, in addition, the knowledge of radiation protection among professionals is often poor. Once the new safety report is finalized and published, it should be widely advertised and promoted.
Specific Issues

Updated Guidance on Exemption and Clearance

RASSC has approved the revision of the safety guide *Application of the Concepts of Exclusion, Exemption and Clearance* (RS-G-1.7). It has been decided that two separate safety guides, one dealing with exemption and the other dealing with clearance, will be developed. It has been further agreed that the issue of trade in contaminated commodities, which is addressed in RS-G-1.7, will be dealt with in a separate document. In particular, the guidance on clearance is required urgently to support decommissioning activities.
Specific Issues

Management of Existing Exposure Situations

Existing exposure situations cover a range of everyday situations where people are exposed to radiation – from natural background radiation to the recovery phase following a nuclear accident. The principles of justification and optimization apply, but radiation doses are controlled through reference levels rather than dose limits. The flexibility that is necessary to deal effectively with each individual situation also gives rise to inconsistency in the approach to decision-making. Further guidance on managing existing exposure situations needs to be developed.
Specific Issues

Developing a Holistic Approach to Workplace Risks

Employers are required to provide a safe and healthy workplace and to foster a strong safety culture. In those workplaces where radiation is used, radiation is only one of many hazards, and is seldom the dominant one. While it is important to reduce radiation risks to the extent possible, this must not be achieved at the expense of increasing other risks. The IAEA should co-ordinate with the ILO and other relevant organizations to include radiation as part of a holistic approach to occupational health and safety.
Thank you!